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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,744

07/06/2005

Alexander Maass

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EXAMINER

TWEEL JR, JOHN ALEXANDER

ART UNIT

PAPER NUMBER

2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/517,744	Applicant(s) MAASS ET AL.	
	Examiner John A. Tweel, Jr.	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because certain components, especially those found in Figures 1 and 2, lack descriptive labels making comprehension of the drawing difficult. Also, the hand-drawn figures and reference numbers are hard to distinguish. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because line 2 contains a misspelling of the word --driver--. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities:
 - Page 1: The continuity data, such as the national stage application of a prior PCT application, should be included before the body of the specification.
 - Page 4, Line 30: The word “an” and “edge” have been juxtaposed.Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 11, 17, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by **Forbes et al** [U.S. 6,894,606].

For claim 11, the method for driver information taught by Forbes includes the following claimed steps, as noted, 1) the claimed providing a warning including driver information is achieved using the alerts seen in Figures 4 and 5 to indicate to the driver that he is drifting too far into an adjacent lane, and 2) the claimed recording at least one boundary of the traffic lane is achieved using the recorder (Claim 1) being capable of preserving camera signals, the warning being a function of a driving situation of the vehicle.

For claim 17, the Forbes reference includes the provision of milder warning signals such as a voice warning or activation of the vehicle air conditioning (Col. 7, Lns. 1-10).

For claim 20, the device for driver information taught by Forbes includes the following claimed subject matter, as noted, 1) the claimed evaluation unit is met by the cameras (Nos. 102, 104) that activate a warning (Figs. 4 and 5) when a threat of leaving a lane occurs, and 2) the claimed microcomputer is met by the roadway detector and recorder (Claim 1) that records at least one boundary marking and preserving camera signals, wherein the driver warning is a function of a driving situation.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Forbes et al** in view of **Pawlicki et al** [U.S. 7,038,577].

For claim 12, the method taught by Forbes can discern between a solid and dashed boundary line. However, the traffic situation in a neighboring lane is not specifically described in the reference.

The object detection system for a vehicle taught by Pawlicki presents a very versatile imaging and control system that can function as a blind spot detection system, a lane change assist or aid system, a reverse park aid system, and, in one embodiment, a land departure warning system. The land departure warning system can sense the presence of oncoming traffic in adjacent lane or lanes (Col. 25, Lns. 9-20) and issue an urgent warning when oncoming traffic is detected. The warning system may also be operable to differentiate between the different types of lane markings along roads (Col. 25, Lns. 48-52).

The Pawlicki reference is plain evidence that warning systems may be tailored to give warnings depending upon the type of traffic and boundary marker in an adjacent lane. This affords variability and versatility to the system that is not present in other prior art systems. This may also reduce false alarms and alarms that are unnecessarily urgent to the driver or user. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include differentiation between different traffic and lane markings for the purpose of increasing the usefulness and versatility of the system.

For claims 13 and 14, as described above, the Pawlicki reference can determine between a solid and dashed line and can activate said warning system depending on a number of road conditions (Col. 24, Lns. 29-47).

For claim 15, the Pawlicki reference can sense the presence of oncoming traffic (Col. 25, Lns. 9-20) and issue an urgent warning if needed.

For claim 16, it is unknown exactly what a "breakdown strip" is; however, if it is a shoulder lane, then the Pawlicki reference can determine this situation.

For claim 18, the driver warning of Pawlicki will occur if oncoming traffic is recognized or a vehicle in a lane flowing in the same direction (Col. 24, Lns. 36-40).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Forbes et al** in view of **Dantoni** [U.S. 5,673,019].

For claim 19, the method of Forbes does not include activation of a corresponding blinker to inform other traffic participants.

Automatic turn signals are not new in the prior art. The automatic turn signal and safety device taught by Dantoni includes a turn signal adapter mounted on the steering shaft of a vehicle to control the flow of electricity. This then activates a series of bulbs depending on the amount of turn angle of the steering wheel. This reference is plain evidence that blinkers have been automatically activated to warn other drivers of a vehicle's turning intentions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an automatic turn signal in the system of

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Forbes for the purpose of enhancing the usefulness of the system and for taking advantage of a well-known alerting system.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bender et al [U.S. 5,835,028] determines painted road lane markers and signals when a vehicle has moved beyond a threshold distance.

Dobler et al [U.S. 6,038,496] provides an automatic lane maintenance function.

Satoh et al [U.S. 6,489,887] comprises a camera and speed and yaw sensors.

Levine [U.S. 6,502,035] automatically detects and monitors movements of a vehicle and communicates said movements to others.

Kawazoe [U.S. 6,748,302] includes a controller coupled to a road image detector for taking a view ahead of the vehicle.

Shimakage [U.S. 7,091,838] determines lateral displacement of a vehicle.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Tweel, Jr. whose telephone number is 571 272 2969. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571 272 2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAT
3/15/07

A handwritten signature in black ink, appearing to read 'John Tweel', with a large, stylized 'J' and a cursive 'Tweel'.

JOHN TWEEL
PRIMARY EXAMINER